Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application

1. (Currently Amended). A degassing centrifugal apparatus comprising

- a rotatable hollow rotor (20) connected to a stationary fluid inlet (14) at one end and a stationary liquid outlet (16) at the opposite end, and having a gas exhaust (36) in the center thereof,
- said rotor (20) having at its inlet end a bladed wheel (26) for rotating a fluid in said rotor (20), ~~c h a r a c t e r i z e d in that said bladed wheel comprises a shovel wheel (26) for accelerating the fluid flow in said rotor inlet end and causing said fluid to rotate at a peripherical velocity higher than the peripherical velocity of said rotor inlet end,~~
- said ~~shovel~~ bladed wheel (26) having a plurality of ~~shovels~~ blades (24) extending inwards from said inner wall of said rotor (20) and having an arcuate shape with a leading edge (27) directed towards said stationary inlet (14) and an outlet edge (29) directed towards said inner wall, said

outlet edge (29) forming an angle (β) with a line parallel to the centerline of said rotor (20), the shape of said arcuate blades being effective for accelerating the fluid flow in said rotor inlet end and causing said fluid to rotate at a peripherical velocity higher than the peripherical velocity of said rotor inlet end.

2. (Currently Amended). An apparatus according to claim 1, wherein said leading edge (27) of said ~~shovel~~ arcuate blade (24) forms an angle (α) with a line parallel to the centerline of said rotor (20).

3. (Original). An apparatus according to claim 1, wherein said angle (α) is between 45° and 70° and said angle (β) is between 30° and 80°.

4. (Original). An apparatus according to claim 1, wherein said hollow rotor (20) comprises an elongated tubular or conical gas separation drum (34) of an essentially circular cross-section with a smooth surface.

5. (Currently Amended). An apparatus according to claim 4, wherein said ~~shovel wheel~~ bladed wheel (26) is located in the inlet (22) of said rotor (20) and said gas separation drum (34) is connected directly to said rotor inlet (22) and has a diameter which is significantly larger than the diameter of said rotor inlet (22).

6. (Original). An apparatus according to any one of the preceding claims 1 to 5, wherein said stationary inlet (14) is provided with means for directing a fluid flow at a tangential direction into said rotor inlet (22).

7. (Original). An apparatus according to claim 6, wherein said means for directing the fluid flow comprise stationary blades (23) extending from a tubular wall of said stationary inlet (14).

8. (Original). An apparatus according to claim 1, wherein said stationary inlet (14) is provided with a valve for regulating the fluid flow therethrough.

9. (Currently Amended). An apparatus according to claim 1, wherein said hollow rotor (20) comprises two separately rotatable bodies, the first of said bodies comprising a rotatable inlet (22) with said inlet ~~shovel wheel~~ bladed wheel (26) and the second one comprising a generally tubular rotatable gas separating drum (34).

10. (Original). An apparatus according to claim 1, wherein said inlet end of said rotor (20) comprises throttle means (38, 38') for directing an incoming fluid flow away from the center of said rotor (20).

11. (Original). An apparatus according to claim 1 wherein said rotor (20) comprises at its outlet end a pumping zone for pumping degassed liquid.

12. (Original). An apparatus according claim 1, wherein said fluid inlet (14) and said liquid outlet (16) are connected to each other by a tubular housing (12), forming a stationary closed space enclosing said rotor (20).

13. (Currently Amended). An apparatus according to ~~any one of the preceding~~ claim~~s~~ 1 wherein a vacuum source is connected to said gas outlet (36).

14. (Original). A process for degassing a fluid by centrifuging, comprising

- feeding a fluid containing a mixture of liquid and gas into a rotating inlet end of a rotating hollow rotor,
- accelerating the fluid flow in said rotor inlet end to cause said fluid to rotate at a peripherical velocity higher than the peripherical velocity of said rotor inlet end,
- bringing said fluid to flow axially along the inner wall of said rotor towards a liquid outlet at the opposite end of said rotor while causing said gas to separate from said liquid by centrifugal force,
- discharging the resulting degassed liquid at said rotor outlet end, and
- discharging the gas through a gas exhaust.

15. (Original). A process according to claim 14, wherein said peripherical velocity of said fluid flow is accelerated prior to being fed into said rotor inlet.

16. (Original). A process according to claim 14 or 15, wherein the fluid flow leaving said rotor inlet is directed into a rotor portion having a peripherical velocity substantially corresponding to the peripherical velocity of said fluid flow in said rotor inlet.

17. (Currently Amended). A process according to claim 14, wherein the feeding and rotation of said fluid is performed such that the axial flow on the rotating wall of said rotor inlet has a Froude number close to 1~~, preferably <1~~ and at said rotor outlet has a Froude number Fr<1.

18. (Original). A process according to claim 14, wherein the degassed liquid is discharged peripherally at said rotor outlet at a pumping pressure.

19. (Currently Amended). An improvement in a process for producing paper or board in a paper machine including the steps of providing a papermaking stock of pulp; diluting said stock in one or more stages with backwater drained through a forming wire of said paper machine; feeding said stock through a head box of said paper machine onto said forming wire; forming a web on said forming wire while allowing water from said stock to drain through said wire;

feeding said web through a press section and a drying section of said paper machine to provide paper or board, said improvement comprising pumping, ~~c h a r a c t e r i z e d in that~~ at least a portion of said backwater and/or diluted stock ~~is pumped~~ with at least one degassing centrifugal apparatus comprising a rotatable hollow rotor (20) connected to a stationary fluid inlet (14) at one end and a stationary liquid outlet (16) at the opposite end, and having a gas exhaust (36) in the center thereof, said rotor (20) having at its rotor inlet (22) a bladed ~~shovel wheel~~ bladed wheel (26) for accelerating the flow of said backwater and/or stock in said rotor inlet end and causing said fluid to rotate at a peripherical velocity higher than the peripherical velocity of said rotor inlet end, wherein said ~~shovel wheel~~ bladed wheel (26) comprises a plurality of ~~shovels~~ blades (24) extending inwards from said inner wall of said rotor (20) and having an arcuate shape with a leading edge (27) directed towards said stationary inlet (14) and an outlet edge (29) directed towards said inner wall, said outlet edge (29) forming an angle (β) with a line parallel to the centerline of said rotor (20).

20. (New). A process according to claim 17, wherein the axial flow on the rotating wall of said rotor inlet has a Froude number Fr<1.